

line; the lateral stripe extending forwards to the nostril, passing through the eye; upper lip yellowish white; yellowish white beneath, speckled with olive.

Total length 780 millim.; tail 240.

A single specimen from Cajamarca, 9000 feet.

Closely allied to *P. elegans*, Tsch. Distinguished by the shorter snout and the shorter frontal shield.

XIX.—*Descriptions of new Batrachians and Reptiles from the Larut Hills, Perak.* By G. A. BOULENGER, F.R.S.

I AM indebted to Mr. A. L. Butler, Curator of the Selangor Museum, for an opportunity of examining a number of batrachians and reptiles collected by him in the Larut Hills, among which I was pleased to find examples of several undescribed species. Unless otherwise stated, types of these new species are preserved both in the British Museum and in the Selangor Museum at Kuala Lumpur.

Leptobrachium heteropus.

Tongue large, pyriform, feebly notched behind. Vomerine teeth none. Head moderate, as long as broad; snout short, truncate at the end; canthus rostralis strong; loreal region concave; interorbital space as broad as the upper eyelid; tympanum distinct, half the diameter of the eye. Fingers moderate, blunt, first and second equal; toes moderate, blunt, webbed at the base only, the web continued as a slight fringe along each side of the toes; a strong dermal ridge or keel, formed by a modification of the subarticular tubercles, runs along the lower surface of the third and fourth toes, which thus appear to be compressed; a small oval inner metatarsal tubercle. The tibio-tarsal articulation reaches the centre of the eye. Skin smooth, with small tubercles on the upper eyelids. Grey above, with darker light-edged symmetrical markings, the largest occupying the middle of the back; a black lumbar spot; a black canthal and temporal streak; black spots on the sides; dark cross-bars on the limbs; lower parts grey, speckled with black; a round whitish spot on each side of the breast, at the base of the arm, another on the back of each thigh.

From snout to vent 33 millim.

A single specimen was obtained in the Larut Hills at an altitude of 3500 feet. Selangor Museum.

This species is closely allied to *L. pelodytoides*, Blgr., from which it may be distinguished by the lesser web and the extraordinary dermal ridges under the toes, a point of structure which is only foreshadowed in the types of *L. pelodytoides*.

Ixalus larutensis.

Snout rounded or obtusely pointed, as long as the diameter of the orbit; canthus rostralis distinct; loreal region concave; nostril a little nearer the end of the snout than the eye; interorbital space as broad as the upper eyelid; tympanum moderately distinct, half the diameter of the eye. Fingers free; toes half-webbed; disks of fingers as large as the tympanum; subarticular tubercles moderate; a small inner metatarsal tubercle. The tibio-tarsal articulation reaches between the eye and the tip of the snout. Upper parts smooth or with small flat warts; throat, belly, and lower surface of thighs granulate. Grey-brown or reddish brown above, with dark brown symmetrical markings, a cross-band between the eyes being constant; usually a)(or)-(shaped marking on the anterior part of the body; sides of body and of thighs with white spots between a brown network; limbs with dark cross-bands; lower parts white, spotted or speckled with brown.

From snout to vent 35 millim.

Several specimens from the Larut Hills at 4000 to 4500 feet.

Ixalus vermiculatus.

Head large, broader than long; snout rounded, as long as the diameter of the orbit; canthus rostralis distinct; loreal region concave; nostril a little nearer the end of the snout than the eye; interorbital space as broad as the upper eyelid; tympanum distinct, two fifths the diameter of the eye. Fingers with a rudiment of web; toes half-webbed; disks of fingers as large as the tympanum; subarticular tubercles moderate; a small inner metatarsal tubercle. The tibio-tarsal articulation reaches between the eye and the tip of the snout. Upper parts smooth; throat, belly, and lower surface of thighs granulate. Olive-green above, closely vermiculate with black; upper surface of thighs with a series of large black blotches; sides of thighs and anal region orange-yellow; white beneath. Male with a large gular vocal sac.

From snout to vent 33 millim.

Three specimens from the Larut Hills at 4000 feet.

Microhyla Butleri.

Habit slender. Snout rounded, as long as the orbit; inter-orbital space broader than the upper eyelid. Fingers and toes rather slender, the tips dilated into small but well developed disks; first finger much shorter than second; toes webbed at the base; subarticular tubercles small; two very small metatarsal tubercles. The tibio-tarsal articulation reaches the eye. Skin smooth. Grey on the back, pale reddish on the sides and limbs, with symmetrical dark brown markings forming bars on the limbs; some small scarlet spots on the sides; a whitish oblique streak from the eye to the base of the fore limb and a whitish spot on the end of the snout; whitish beneath, throat and breast speckled with dark brown.

From snout to vent 21 millim.

A single specimen from the Larut Hills at 4000 feet. Selangor Museum.

Closely allied to *M. achatina*. Distinguished by the shorter limbs.

Microhyla annectens.

Habit slender. Snout rounded, as long as the orbit; inter-orbital space broader than the upper eyelid. Fingers and toes moderately slender, the tips dilated into rather large disks; first finger much shorter than second; toes half-webbed; subarticular tubercles feebly prominent; a very small inner metatarsal tubercle. Hind limb remarkably long, the tibio-tarsal articulation reaching far beyond the tip of the snout; tibia two thirds length of head and body. Skin smooth. Brown above, with symmetrical blackish light-edged markings, a large one on the back being produced to between the eyes, where it expands into a transverse bar; side, from the shoulder to the lumbar region, black, with sharply defined upper outline; an oblique whitish streak from below the eye to the base of the fore limb; a blackish spot at the knee, a dark cross-bar on the thigh, another on the femur, and a third on the tarsus; lower parts closely marbled with dark brown.

From snout to vent 15 millim.

Several specimens from the Larut Hills at 4000 feet.

This species connects *M. achatina* with *M. Berdmorii*.

Gehyra larutensis.

Body and limbs moderately elongate. Head oviform; snout a little longer than the distance between the eye and

the ear-opening, which is small and round; head covered with finely granular scales, which are larger on the snout; rostral twice as broad as deep, with a short median cleft above; nostril pierced between the rostral, the first upper labial, and three nasals, the upper of which is the largest and separated from its fellow behind the rostral by several minute granules; 9 upper and 9 lower labials; symphysial truncate behind; a series of small chin-shields, the median pair largest, scarcely longer than the symphysial. Scales uniformly granulate on the back, limbs, and throat, larger, flat, and imbricate on the belly. Digits free, strongly dilated, with entire lamellæ, the largest of which are angulated or chevron-shaped; these chevron-shaped lamellæ number one under the ballux, three under the third toe, four under the fourth. Tail subcylindrical, covered with small imbricate scales above and beneath. Male with a long continuous series of 42 femoral and præanal pores. Grey-brown above and beneath, tail yellowish, with small darker spots on the back and a vertebral series of small blackish spots widely separated from each other; a dark line on each side of the head, passing through the eye.

	millim.
Total length	69
Head	10
Width of head	6.5
Body	27
Fore limb	10
Hind limb	13
Tail	32

A single specimen from the Larut Hills, under a house, at 3500 feet altitude. Selangor Museum.

Draco punctatus.

Head moderate; snout as long as the diameter of the orbit; nostril lateral, directed outwards; tympanum naked, nearly as large as the eye-opening. Upper head-scales very unequal, keeled; two subtriangular, compressed, enlarged, erect scales on the posterior part of the supraciliary region; 10 or 11 upper labials. The male's gular appendage a little shorter than the head. Male with a very distinct nuchal crest. Dorsal scales unequal, keeled, not larger than ventrals; a lateral series of enlarged distant scales. The fore limb stretched forwards extends a little beyond the tip of the snout; the hind limb reaches the axilla or between the latter and the elbow of the adpressed fore limb. Tail with a dorsal

crest of distinct large, pointed, compressed scales. Dark grey above, with a paler, reddish, vertebral stripe; back, and head above and beneath, with large black dots; wing-membranes black above, with interrupted whitish streaks, colourless beneath; throat and belly pale blue; inner side of neck-lappets and extremity of gular appendage lemon-yellow.

	millim.
Total length.....	247
Head.....	18
Width of head.....	12
Body.....	73
Fore limb.....	37
Hind limb.....	45
Tail.....	156

A single male specimen obtained in the Larut Hills by Mr. A. L. Butler at an altitude of 3000 feet. I have also examined a male from Sarawak, collected by the late Mr. A. Everett, which I had referred to *D. cristatellus*.

Draco formosus.

Head small; snout slightly longer than the diameter of the orbit; nostril directed upwards, perfectly vertical; tympanum naked, smaller than the eye-opening; upper head-scales unequal, keeled; a prominent tubercle at the posterior corner of the orbit; nine or ten upper labials. The male's gular appendage as long as the head, very thin, translucent, covered with very large scales. No nuchal fold. Dorsal scales equal, very feebly keeled, not larger than ventrals; a few widely separated enlarged scales on the side of the back. The fore limb stretched forwards extends considerably beyond the tip of the snout; the adpressed hind limb reaches the axil. Brown above (in life), head greyer, with a few dark spots; wing-membranes olive above, edged with maroon or crimson, with five more or less regular black transverse bands, uncoloured beneath; throat of male, under the lappets and right to the base of the gular appendage, maroon or crimson, of female dark green.

	♂. millim.	♀. millim.
Total length.....	272	?
Head.....	19	23
Width of head.....	12	15
Body.....	78	92
Fore limb.....	42	48
Hind limb.....	53	60
Tail.....	175	? *

* Reproduced.

Several specimens were obtained in the Larut Hills by Mr. A. L. Butler at elevations varying between 1500 and 3000 feet.

Intermediate between *D. Blanfordii*, Blgr., and *D. teniopterus*, Gthr. *D. Blanfordii* occurs also in the Larut Hills.

Lygosoma præsigne.

Section *Hinulia*. Habit lacertiform; the distance between the end of the snout and the fore limb is contained once and a half in the distance between axilla and groin. Snout short, obtusely pointed. Lower eyelid scaly. Nostril pierced in a single nasal; no supranasal; rostral forming a straight transverse suture with the frontonasal, which is broader than long; præfrontals forming a median suture; frontal very narrow behind, as long as frontoparietals and interparietal together, in contact with the three anterior supraoculars; four supraoculars, followed by a very small fifth; nine or ten supraciliaries, first and last largest; frontoparietals and interparietal distinct, latter longer than former; parietals forming a very short suture behind the interparietal; three pairs of nuchals; fifth upper labial below the centre of the eye. Ear-opening oval, nearly as large as the eye-opening; no auricular lobules. 28 smooth scales round the middle of the body; dorsals largest, especially those of the two median series, which are more than twice as broad as long. A pair of enlarged præanals. The hind limb stretched forwards reaches the elbow of the adpressed fore limb. Digits rather long, compressed; subdigital lamellæ smooth, 20 under the fourth toe. Reddish brown above, with scattered black dots, grey on the sides, spotted with black and white; a series of large roundish black spots on each side of the neck on anterior part of body; lips spotted with black; tail black above and on the sides, with irregular annuli of whitish scales; lower parts white.

	millim.
Total length.....	240
Head.....	25
Width of head.....	17
Body.....	85
Fore limb.....	34
Hind limb	47
Tail (reproduced)	130

A single specimen from the Larut Hills at 4000 feet. Selangor Museum.

Lygosoma stellatum.

Section *Hinulia*. Habit lacertiform; the distance between the end of the snout and the fore limb is contained once and one fourth to once and one third in the distance between axilla and groin. Snout moderate, obtusely pointed. Lower eyelid scaly. Nostril pierced in a single nasal; rostral forming a straight transverse suture with the fronto-nasal, which is a little broader than long; præfrontals uniting or forming a short median suture (in one specimen separated by a small azygous shield); frontal as long as frontoparietals and interparietal together, in contact with the two or three anterior supraoculars; four supraoculars, followed by a very small fifth; eight supraciliaries, first and last largest; frontoparietals and interparietal distinct, subequal; parietals forming a suture behind the interparietal; two or three pairs of nuchals; fifth upper labial below the centre of the eye. Ear-opening oval, a little smaller than the eye-opening; no auricular lobules. 24 smooth scales round the middle of the body, dorsals largest, those of the two median series more than twice as broad as long. A pair of enlarged præanals. The hind limb stretched forwards reaches the wrist or the elbow of the adpressed fore limb. Digits rather long, compressed; subdigital lamellæ smooth, 22 to 25 under the fourth toe. Bronze-colour above, spotted all over with black and white, the black spots preceding the white ones and more crowded on the sides; lips spotted with black; the spots disposed in transverse series on the tail; lower parts bluish or greenish white.

	millim.
Total length	173
Head	17
Width of head	10
Body	63
Fore limb	26
Hind limb	36
Tail	93

A specimen, badly preserved unfortunately, was brought home by Mr. S. S. Flower, who obtained it in the Larut Hills, at an altitude of 4400 feet, in April 1898. I have since examined two younger specimens from the same hills, forming part of Mr. A. L. Butler's collection. One was found in a rotten tree at 3500 feet altitude, the other in a house at 4000 feet.

Mr. Butler's collection also contains an example of *Lygosoma Bampfyldei*, E. Bartlett (Journ. Str. Br. As. Soc.

no. 28, 1895, p. 96), a species described from the Upper Rejang River, Sarawak, one of the types of which is now in the British Museum. This form is remarkable in establishing a connecting-link between the sections *Riopa*, Gray, and *Lygosoma*, Gray. It agrees with the former in the presence of supranasals, forming a suture behind the rostral, with the latter in the frontal shield being much broader than the supraocular region. In the Sarawak specimen the fifth upper labial is broken up into several shields, there are 38 scales round the body, and the upper parts are yellowish brown with a dark brown band across the frontal region and another across the occipital. In the Larut specimen the fifth labial is as large as the fourth and borders the eye, the scales number 40, and the dark brown of the occiput extends along the dorsal surface of the body and tail, the sides of which are reddish.

Lycodon Butleri.

Closely allied to *L. fasciatus*, Anderson, but with a larger eye and more strongly angulate ventral and subcaudal shields. Body slightly compressed. Rostral twice as broad as deep, hardly visible from above; internasals three fifths the length of the præfrontals; frontal a little longer than broad, as long as its distance from the end of the snout, shorter than the parietals; loreal more than twice as long as deep, bordering the eye below the single præocular; two postoculars; temporals 2+2; eight upper labials, third, fourth, and fifth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 17 rows; dorsals very feebly keeled. Ventrals 224-228, strongly angulate laterally; anal entire; subcaudals 88-92 pairs. Blackish brown above and beneath, with 43 or 45 rather irregular annuli of whitish spots or edges to the scales.

Total length 540 millim.; tail 115.

Two female specimens from the Larut Hills at altitudes of 4000 and 5000 feet.

XX.—*Description of a new Lizard from Jamaica.*

By G. A. BOULENGER, F.R.S.

Diploglossus Bakeri.

Lateral teeth obtusely tricuspid. Head small, not distinct from neck; snout short, with obtuse canthus; ear-opening